



**west virginia** department of environmental protection

Office of Oil and Gas  
601 57th Street SE  
Charleston, WV 25304  
(304) 926-0450  
(304) 926-0452 fax

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

January 23, 2013

**WELL WORK PERMIT**

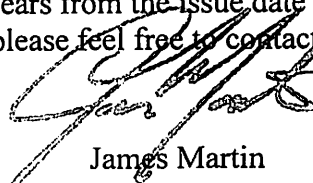
**Horizontal 6A Well**

This permit, API Well Number: 47-1706170, issued to ANTERO RESOURCES APPALACHIAN CORPORATION, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, well operators report of well work, is to be submitted to this office within 90 days of completion of drilling, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

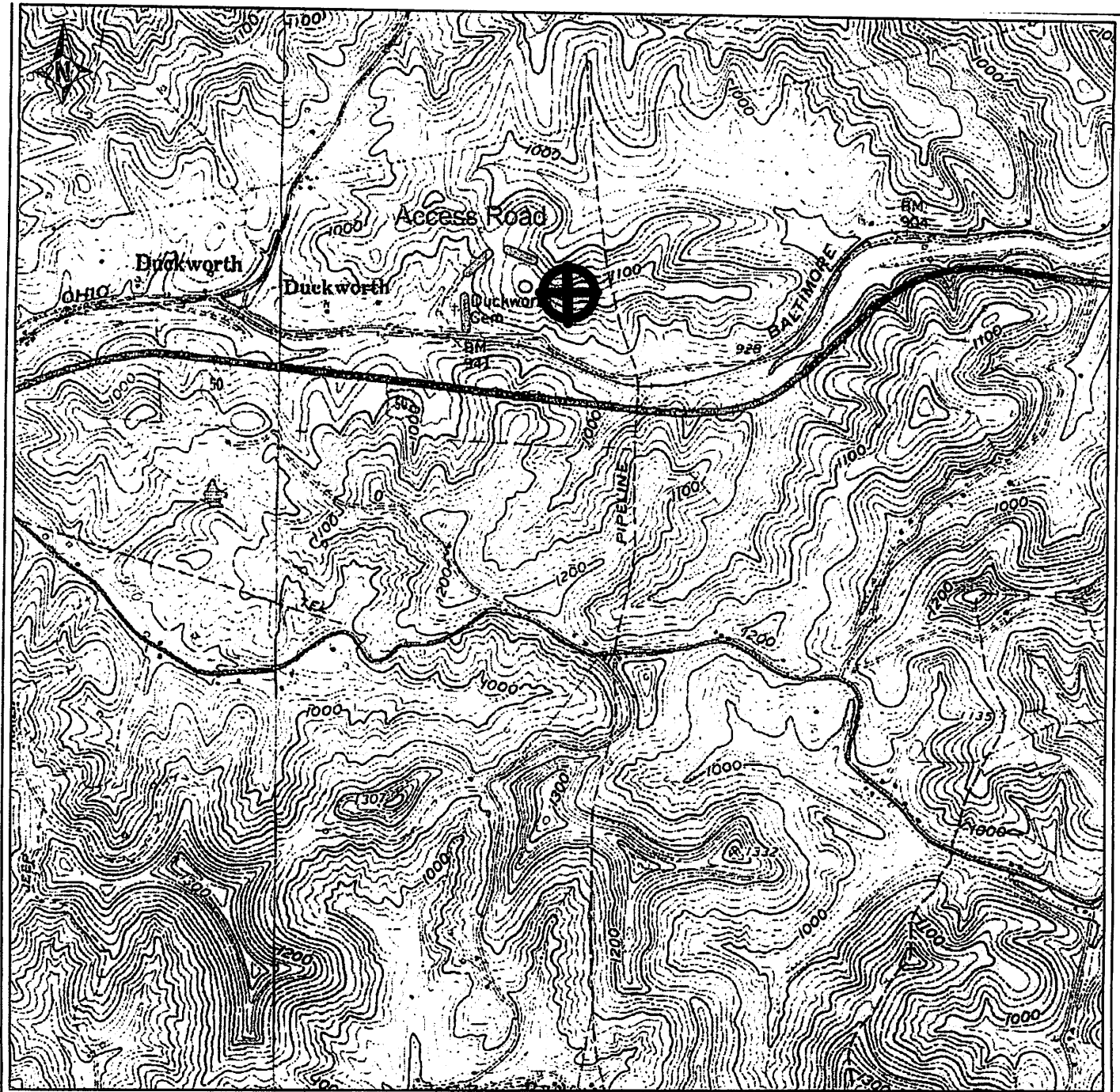
Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.



James Martin  
Chief

Operator's Well No: SEABORN UNIT 2H  
Farm Name: VOGT, GREGORY R. AND CAROL  
**API Well Number: 47-1706170**  
**Permit Type: Horizontal 6A Well**  
Date Issued: 01/23/2013

**Promoting a healthy environment.**



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17-06170

**ANTERO RESOURCES CORPORATION**

APPALACHIAN BASIN

**Seaborn Unit 2H**

Doddridge County



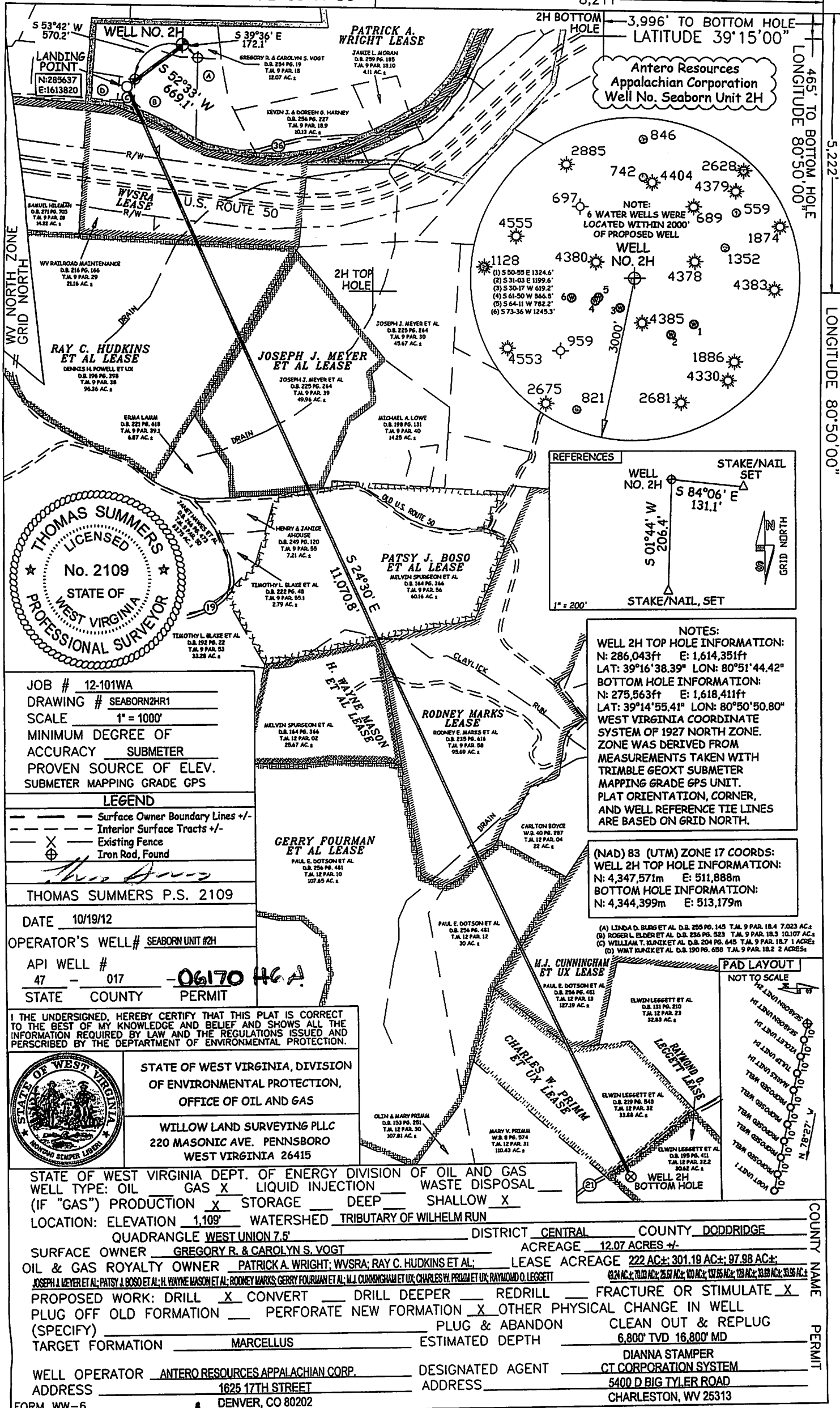
**REMARKS**

QUADRANGLE: WEST UNION  
WATERSHED: TRIB. OF WILHELM RUN  
DISTRICT: CENTRAL

October 19, 2012

LATITUDE 39°17'30"

8,211'





**west virginia department of environmental protection**

Office of Oil and Gas  
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Charleston, WV 25304  
(304) 926-0450  
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Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

January 22, 2013

**WELL WORK PERMIT**

**Horizontal 6A Well**

This permit, API Well Number: 47-1706169, issued to ANTERO RESOURCES APPALACHIAN CORPORATION, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

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James Martin  
Chief

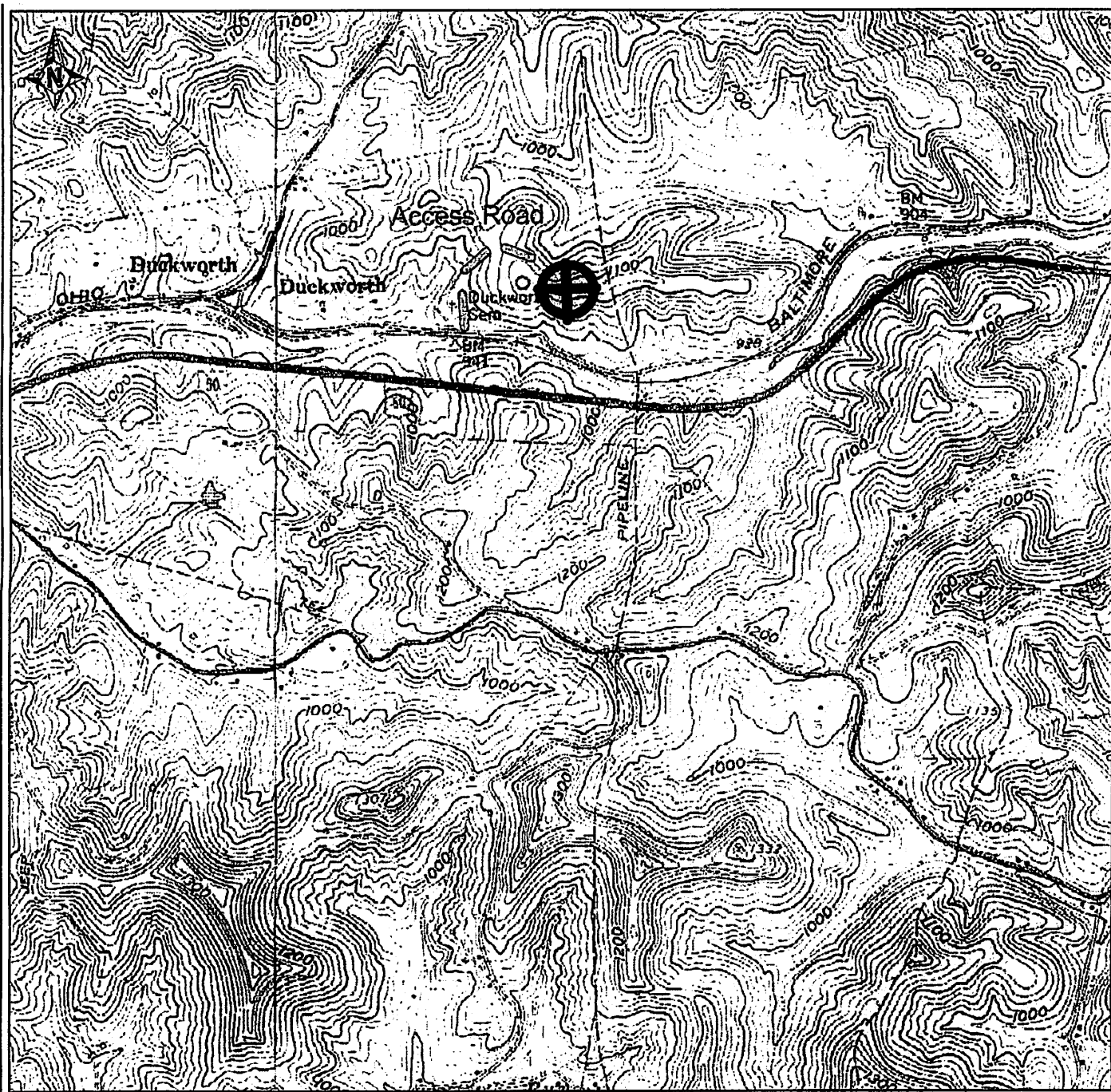
Operator's Well No: SEABORN UNIT 1H  
Farm Name: VOGT, GREGORY R. AND CAROL

**API Well Number: 47-1706169**

**Permit Type: Horizontal 6A Well**

Date Issued: 01/22/2013

**Promoting a healthy environment.**



PETRA 10/19/2012 9:32:31 AM

17-06169

**ANTERO RESOURCES CORPORATION**

APPALACHIAN BASIN

**Seaborn Unit 1H**

Doddridge County



REMARKS  
QUADRANGLE: WEST UNION  
WATERSHED: TRIB. OF WILHELM RUN  
DISTRICT: CENTRAL

October 19, 2012

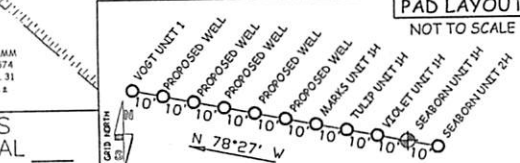


-8.221

LONGITUDE 80°50'00"

-5,220;

LONGITUDE 80°50'00"



WELL OPERATOR	<u>ANTERO RESOURCES APPALACHIAN CORP.</u>	DESIGNATED AGENT	<u>DIANNA STAMPER</u>
ADDRESS	<u>1625 17TH STREET</u>	ADDRESS	<u>CT CORPORATION SYSTEM</u>
	<u>DENVER, CO 80202</u>		<u>5400 D BIG TYLER ROAD</u>
			<u>CHARLESTON, WV 25313</u>

FORM WW-6



**west virginia department of environmental protection**

Office of Oil and Gas  
601 57th Street SE  
Charleston, WV 25304  
(304) 926-0450  
(304) 926-0452 fax

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

January 21, 2013

**WELL WORK PERMIT**

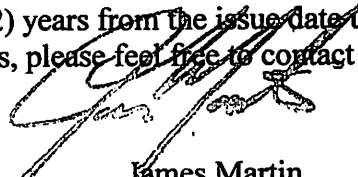
**Horizontal 6A Well**

This permit, API Well Number: 47-1706165, issued to ANTERO RESOURCES APPALACHIAN CORPORATION, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

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Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.



James Martin  
Chief

Operator's Well No: SCHULTE UNIT 1H

Farm Name: ERWIN, JOHN F.

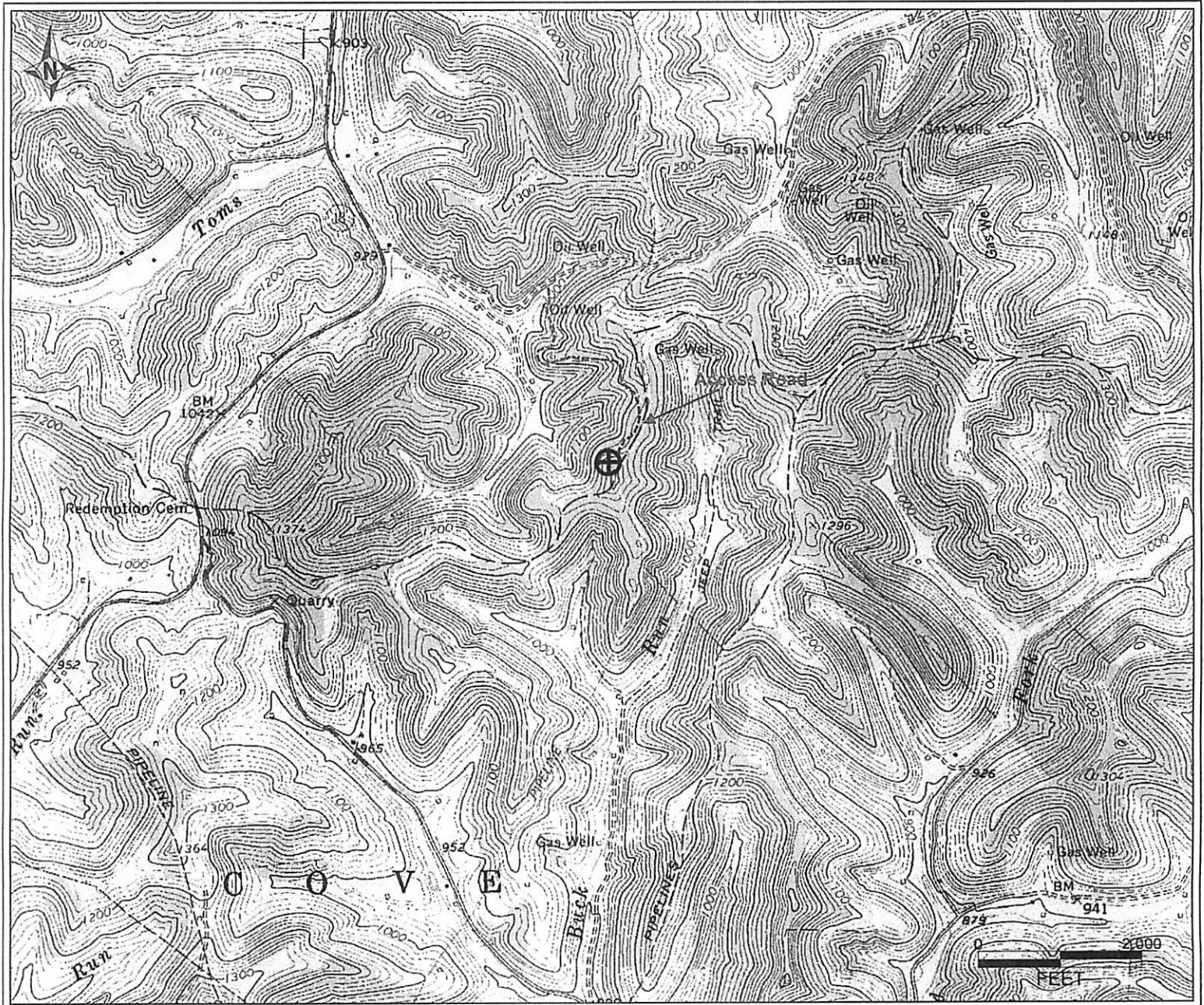
**API Well Number: 47-1706165**

**Permit Type: Horizontal 6A Well**

Date Issued: 01/21/2013

*Print Name: [illegible]*

17-06165



PETRA 3/27/2012 4:45:21 PM

17-06165

# Antero Resources Corporation

APPALACHIAN BASIN

SCHULTE UNIT 1H

Doddridge County

0 2,000 4,000  
FEET

REMARKS  
QUADRANGLE: NEW MILTON  
WATERSHED: TRIB. OF TOMS FORK  
DISTRICT: NEW MILTON

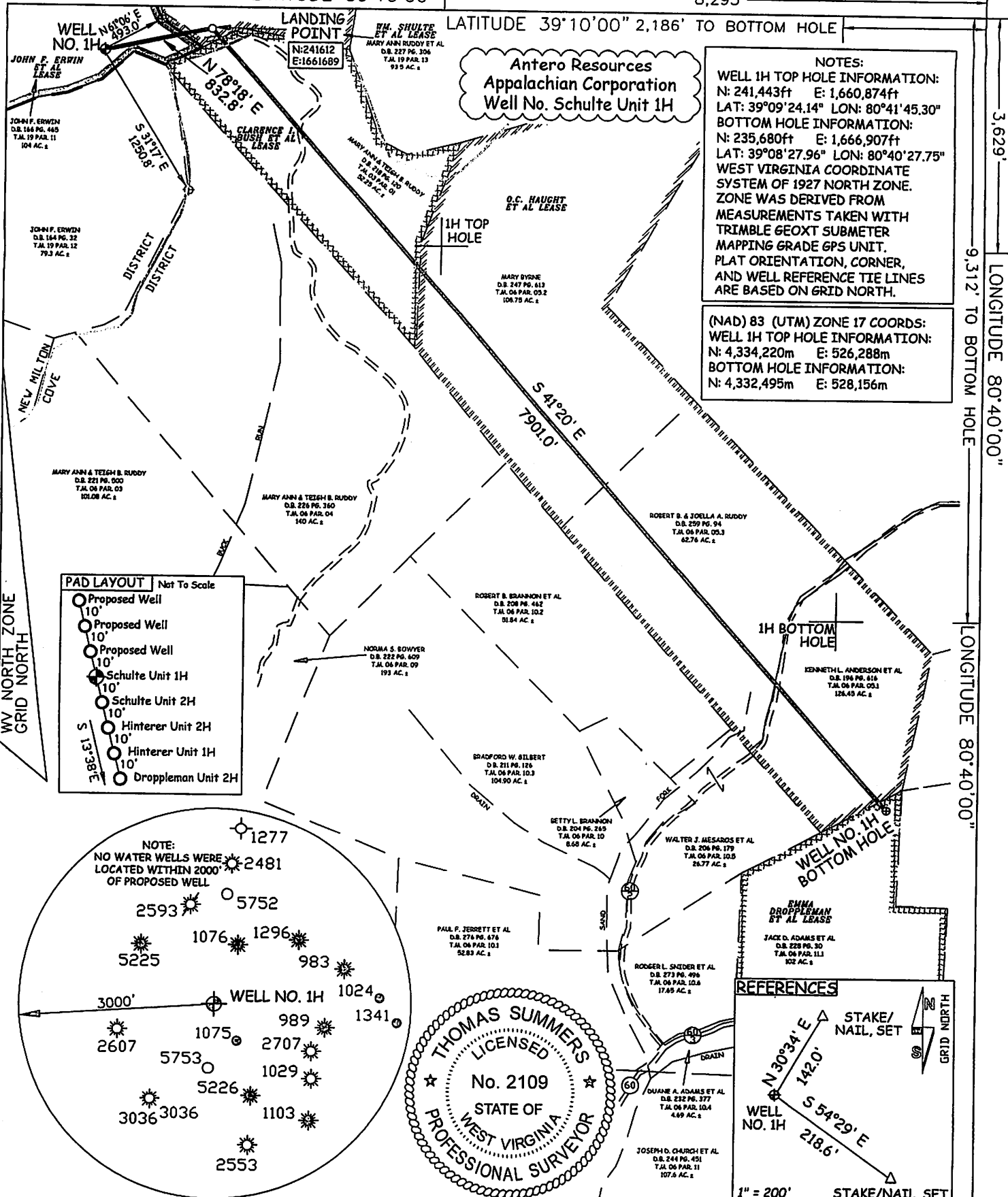
Date: 9/12/2012



LATITUDE 39°10'00"

8,295'

LATITUDE 39°10'00" 2,186' TO BOTTOM HOLE



JOB # 12-079WA

DRAWING # SCHULTE1H

SCALE 1" = 1000'

MINIMUM DEGREE OF ACCURACY SUBMETER

PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY  
DIVISION OF OIL AND GASWELL TYPE: OIL ☐ GAS ☐ LIQUID INJECTION ☐ WASTE DISPOSAL ☐  
(IF "GAS") PRODUCTION ☒ STORAGE ☐ DEEP ☐ SHALLOW ☒  
LOCATION: ELEVATION 1218' WATERSHED TRIBUTARY OF TOMS FORK

QUADRANGLE NEW MILTON 7.5'

SURFACE OWNER JOHN F. ERWIN

OIL & GAS ROYALTY OWNER JOHN F. ERWIN ET AL; WM. SCHULTE ET AL;  
CLARENCE I. BUSH ET AL; O.C. HAUGHT ET AL; EMMA DROPPLEMAN ET ALPROPOSED WORK: DRILL ☒ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR STIMULATE ☒  
PLUG OFF OLD FORMATION ☐ PERFORATE NEW FORMATION ☒ OTHER PHYSICAL CHANGE IN WELL  
(SPECIFY) ☐ PLUG & ABANDON ☐ CLEAN OUT & REPLUG

TARGET FORMATION MARCELLUS

ESTIMATED DEPTH

7,300' TVD 15,500' MD

WELL OPERATOR ANTERO RESOURCES APPALACHIAN CORP.

DESIGNATED AGENT

DIANNA STAMPER  
CT CORPORATION SYSTEM

ADDRESS 1625 17TH STREET

ADDRESS

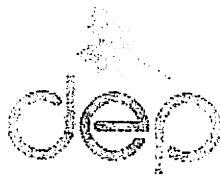
5400 D BIG TYLER ROAD

FORM WW-6

DENVER, CO 80202

CHARLESTON, WV 25313

COUNTY NAME PERMIT



**west virginia department of environmental protection**

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Randy C. Huffman, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

January 21, 2013

**WELL WORK PERMIT**

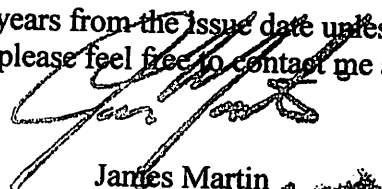
**Horizontal 6A Well**

This permit, API Well Number: 47-3305708, issued to ANTERO RESOURCES APPALACHIAN CORPORATION, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

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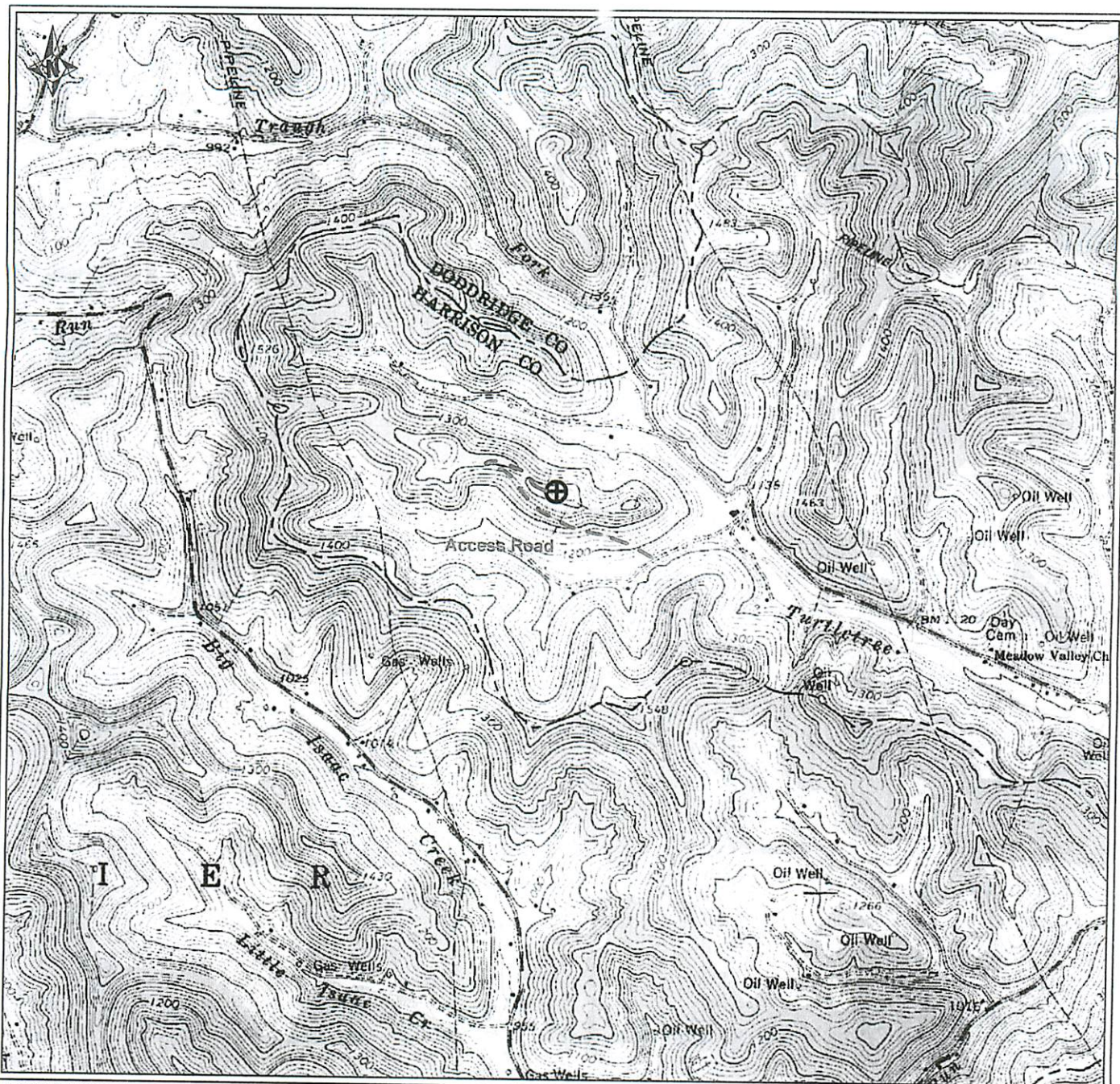


James Martin  
Chief

Operator's Well No: ONEACRE UNIT 1H  
Farm Name: CORDER, GERALDD AND LOUEI  
API Well Number: 47-3305708  
Permit Type: Horizontal 6A Well  
Date Issued: 01/21/2013

Promoting a healthy environment.





PETRA 6/6/2012 12:01:17 PM

33-05708

## Antero Resources Corporation

### Appalachian Basin

Oneacre Unit 1H

Harrison County



**REMARKS**  
 QUADRANGLE: BIG ISSAC  
 WATERSHED: TURTLE TREE FORK OF  
 TENMILE CREEK  
 DISTRICT: UNION

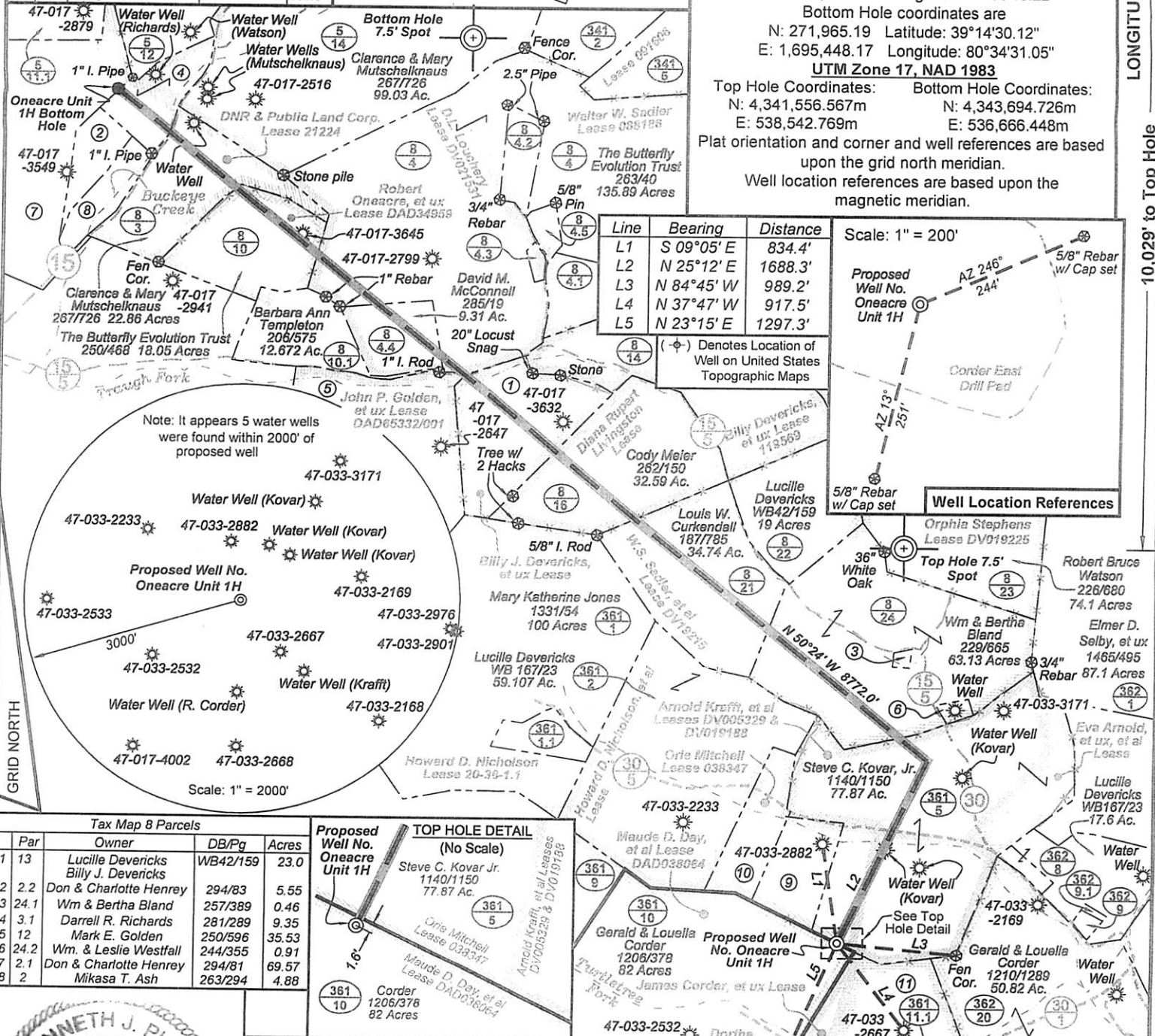
June 6, 2012



Antero Resources  
Well No. Oneacre Unit 1H  
Antero Resources  
Appalachian Corporation

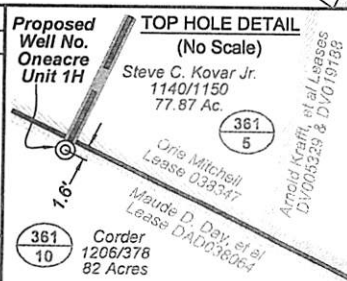
Tax Map 361 Parcels

Par	Owner	DB/Pg	Acres
9	Lucille Devericks	WB167/23	9.84
10	Lucille Devericks	WB167/23	9.70
11	Roger M. Corder	1206/364	110.0



Tax Map 8 Parcels

Par	Owner	DB/Pg	Acres
1	Lucille Devericks	WB42/159	23.0
2	Don & Charlotte Henrey	294/83	5.55
3	Wm & Bertha Bland	257/389	0.46
4	Darrell R. Richards	281/289	9.35
5	Mark E. Golden	250/596	35.53
6	Wm. & Leslie Westfall	244/355	0.91
7	Don & Charlotte Henrey	294/81	69.57
8	Mikasa T. Ash	263/294	4.88



I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Department of Environmental Protection.

Kenneth J. Plum, P.S. 2216

- Legend
- Proposed gas well
  - Found corner, as noted
  - Creek or Drain
  - Existing Road
  - Surface boundary (approx.)
  - Interior surface tracts (approx.)
  - Existing Fenceline



FILE NO: 132-30-G-12  
DRAWING NO: 132-12 Oneacre 1H Well  
SCALE: 1" = 1200'  
MINIMUM DEGREE OF ACCURACY:  
Submeter  
PROVEN SOURCE OF ELEVATION:  
WVDOT, Bridgeport, WV

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS

DATE: October 15 20 12  
OPERATOR'S WELL NO. Oneacre Unit 1H  
API WELL NO:  
47 - 033 - 05708 H6A  
STATE COUNTY PERMIT

WELL TYPE: ☐ OIL ☒ GAS ☐ LIQUID INJECTION ☐ WASTE DISPOSAL  
(IF GAS) PRODUCTION: ☐ STORAGE ☐ DEEP ☒ SHALLOW  
LOCATION: ELEVATION: 1405' WATERSHED: Turtletree Fork of Tenmile Creek QUADRANGLE: Big Isaac  
DISTRICT: Union  
SURFACE OWNER: Gerald & Louella Corder  
ROYALTY OWNER: Maude D. Day, et al; Orle Mitchell; Arnold Krafft, et al; W. S. Sadler, et al  
LEASE NO: DAD038064; 038347; 21224  
PROPOSED WORK: ☒ DRILL ☐ CONVERT ☐ DRILL DEEPER ☒ FRACTURE OR STIMULATE ☐ PLUG OFF OLD FORMATION  
☒ PERFORATE NEW FORMATION ☐ OTHER PHYSICAL CHANGE IN WELL (SPECIFY)  
☐ PLUG AND ABANDON ☐ CLEAN OUT AND REPLUG  
TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: TVD 7,700' MD 17,200'  
WELL OPERATOR: Antero Resources' Appalachian Corporation  
ADDRESS: 1625 17th Street  
Denver, CO 80202  
DESIGNATED AGENT: Dianna Stamper - CT Corporation System  
ADDRESS: 5400 D Big Tyler Road  
Charleston, WV 25313





**west virginia department of environmental protection**

Office of Oil and Gas  
601 57th Street SE  
Charleston, WV 25304  
(304) 926-0450  
(304) 926-0452 fax

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
www.dep.wv.gov

January 22, 2013

**WELL WORK PERMIT**

**Horizontal 6A Well**

This permit, API Well Number: 47-1706168, issued to ANTERO RESOURCES APPALACHIAN CORPORATION, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

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James Martin  
Chief

Operator's Well No: SCHULTE UNIT 2H

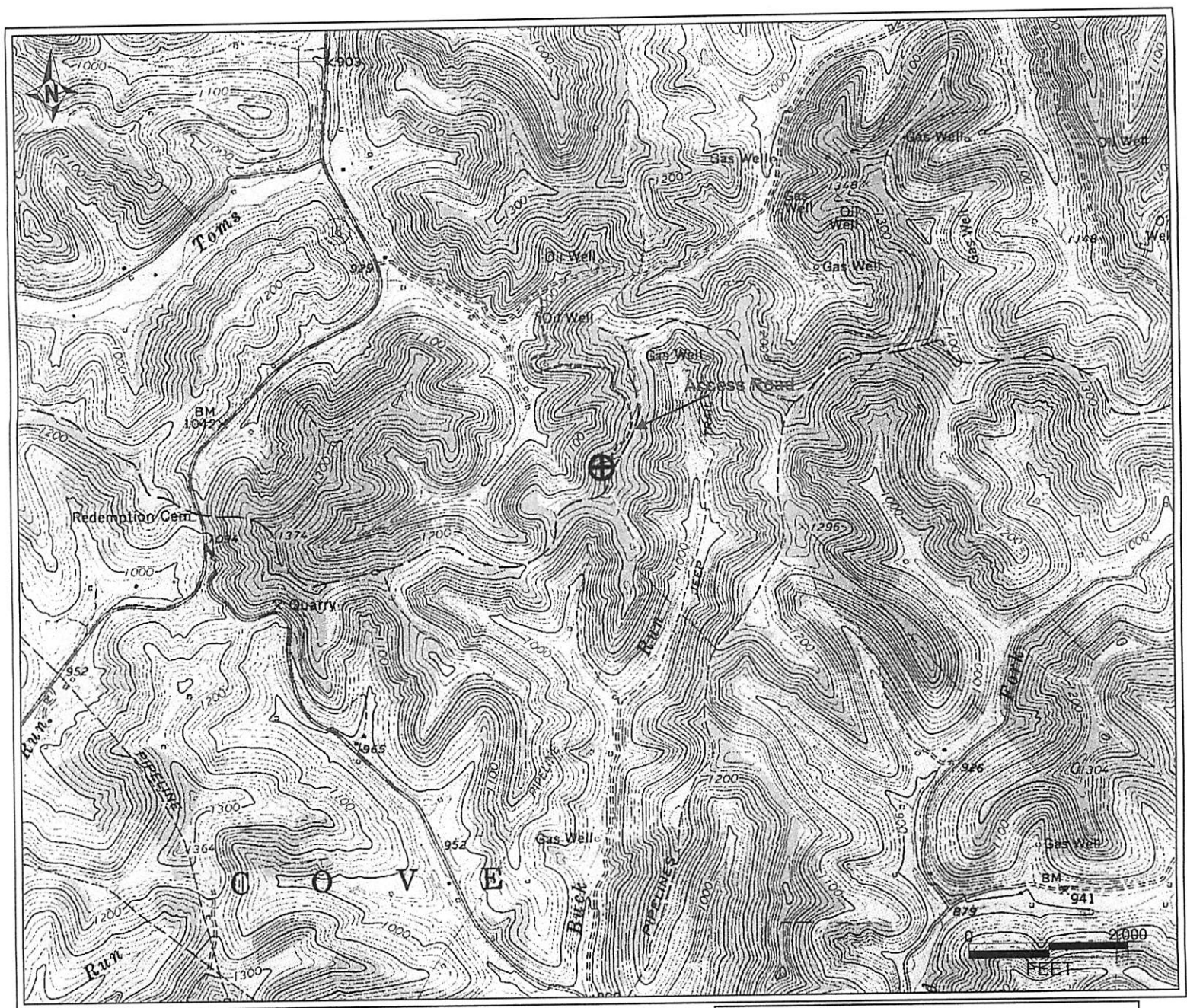
Farm Name: ERWIN, JOHN F.

**API Well Number: 47-1706168**

**Permit Type: Horizontal 6A Well**

Date Issued: 01/22/2013

**Promoting a healthy environment.**



PETRA 3/27/2012 4:45:21 PM

17-06168

Antero Resources Corporation
APPALACHIAN BASIN
SCHULTE UNIT 2H
Doddridge County
0 2,000 4,000 FEET
REMARKS QUADRANGLE: NEW MILTON WATERSHED: TRIB. OF TOMS FORK DISTRICT: NEW MILTON
Date: 9/12/2012



NAD 27 STATE PLANE  
COORDINATES  
WV SOUTH  
N. 562560  
E. 1978370

TM 5 P 10

HERBERT WEST  
DB 91 PG 391  
TM 5 P 25

ROAD INTERSECTION

CHARLES WARD  
NB 17 PG 344  
TM 5 P 30

1587.86'

SAMUEL THOMAS  
NB 18 PG 189  
TM 5 P 26

TM 5 P 16

ELSIE SHAMBLIN  
DB 48 PG 459  
TM 9 P 5.1

WELL NO. B808

DENNIS E. DAWSON ET. AL.  
NB 17 PG 344  
TM 5 P 31

VICTORIA WARD  
DB 118 PG 448  
TM 9 P 17.3

PHYLLIS DAWSON  
DB 118 PG 479  
TM 5 P 32

PIERSON LUMBER  
DB 188 PG 498  
TM 9 P 46

VICTORIA WARD  
DB 182 PG 141  
TM 9 P 17.1

VICTORIA WARD  
DB 118 PG 473  
TM 9 P 17.2

WELL NO. B808

2400'

WELL NO. B807

PAUL PARRY  
DB 181 PG 521  
TM 9 P 39.1

ROAD INTERSECTION

## REFERENCES

14" WHITE OAK

6" HICKORY

WELL NO. B808

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. 08115A

DRAWING NO. \_\_\_\_\_

SCALE 1" = 500'MINIMUM DEGREE OF  
ACCURACY 1:2500PROVEN SOURCE OF  
ELEVATION GPS OBSERVATION

I THE UNDERSIGNED, HEREBY CERTIFY THAT  
THIS PLAT IS CORRECT TO THE BEST OF MY  
KNOWLEDGE AND BELIEF AND SHOWS ALL THE  
INFORMATION REQUIRED BY LAW AND THE REGU-  
LATIONS ISSUED AND PRESCRIBED BY THE DEPART-  
MENT OF ENVIRONMENTAL PROTECTION.

(SIGNED) \_\_\_\_\_

R.P.E. \_\_\_\_\_

L.L.S. 1956

PLACE SEAL HERE

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OIL AND GAS DIVISION

DATE DECEMBER 2, 20 09OPERATOR'S WELL NO. B808

API WELL NO. \_\_\_\_\_

4701502825

STATE

COUNTY

PERMIT

CANCELLED

WELL TYPE: OIL ☐ GAS ☒ LIQUID INJECTION ☐ WASTE DISPOSAL ☐  
(IF "GAS,") PRODUCTION ☒ STORAGE ☐ DEEP ☐ SHALLOW ☐LOCATION: ELEVATION 1238.8 WATERSHED LITTLE LAUREL RUNDISTRICT HENRYCOUNTY CLAYQUADRANGLE IVYDALE 7.5'SURFACE OWNER DENNIS DAWSONACREAGE 24.31OIL & GAS ROYALTY OWNER DENNIS DAWSON ET. AL.LEASE ACREAGE 24.31

LEASE NO. \_\_\_\_\_

PROPOSED WORK: DRILL ☒ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR  
STIMULATE ☒ PLUG OFF OLD FORMATION ☐ PERFORATE NEW  
FORMATION ☐ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_PLUG AND ABANDON ☐ CLEAN OUT AND REPLUG ☐TARGET FORMATION BIG INJUN ESTIMATED DEPTH 2200WELL OPERATOR BERRY ENERGY INC.DESIGNATED AGENT DAVID BERRYADDRESS 310 STILES STREET  
CLARKSBURG, WV 26301ADDRESS 310 STILES STREET  
CLARKSBURG, WV 26301

COUNTY NAME

PERMIT



**WARD LEASE**  
**64.5 AC±**WARD, ET AL  
36.25 ACRES±RISKO  
77.83 ACRES±GLASS  
60 ACRES±**WARD**  
**2029**WARD  
57 ACRES±ADAMS  
49.12 ACRES±LAUFF  
6.81 ACRES±LAUFF  
36.66 ACRES±WARD  
7.5 ACRES±KEMPER  
85 ACRES±**WARD 2029**  
**STATE PLANE**  
**COORDINATES**  
**NORTH ZONE**  
(N) 200887  
(E) 1601396**WARD 2029**  
**L & L DECIMAL**  
39.04300  
80.90339**WARD 2029**  
**UTM (NAD 83)**  
14178327  
1667893**NOTES ON SURVEY**

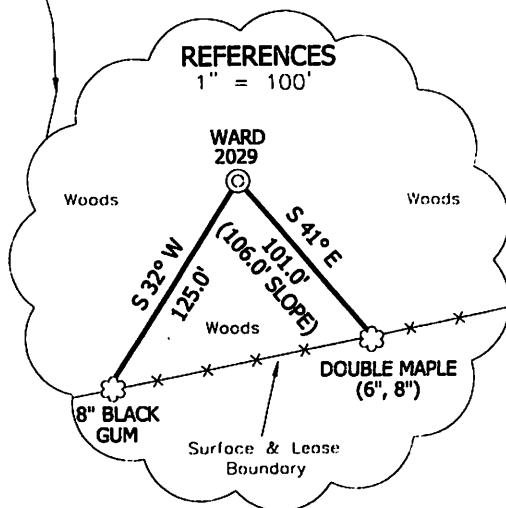
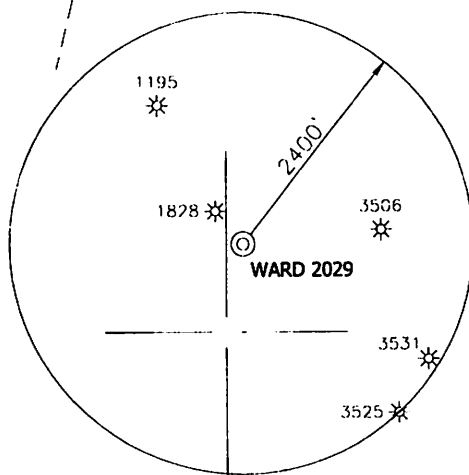
TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH WV NORTH ZONE NAD '27.

TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 11-15-10.

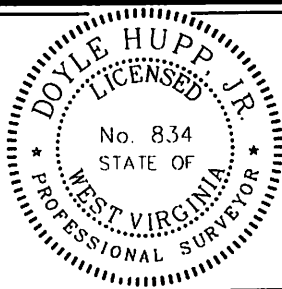
LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 460 AT PAGE 51 AND INFORMATION PROVIDED BY WACO OIL AND GAS CO., INC.

SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF GILMER COUNTY IN NOVEMBER, 2010 AND INFORMATION PROVIDED BY WACO OIL AND GAS CO., INC.

WELL LAT./LONG. ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).



I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S.  
8.34**HUPP Surveying & Mapping**  
P.O. Box 647 Grantsville, WV 26147  
(304) 354-7035 EMAIL: hupp@frontiernet.net

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE NOVEMBER 17, 20 10OPERATORS WELL NO. WARD 2029API  
WELL NO. 47-021-05720  
STATE WV COUNTY GILMER PERMIT 1**CANCELLED**

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. W2011 (BK 47-37)  
PROVEN SOURCE OF ELEVATION DGPS (SUBMETER GRADE) SCALE 1" = 500'

STATE OF WEST VIRGINIA  
DIVISION OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS



WELL TYPE : OIL    GAS X LIQUID INJECTION    WASTE DISPOSAL    IF "GAS" PRODUCTION X STORAGE    DEEP    SHALLOW X

LOCATION : ELEVATION 1,078' WATERSHED PENNSYLVANIA RUN  
DISTRICT TROY COUNTY GILMER QUADRANGLE BURNT HOUSE 7.5'  
SURFACE OWNER PATRICK & LESLIE WARD ACREAGE 57±  
ROYALTY OWNER PATRICK & LESLIE WARD, et al LEASE ACREAGE 64.5±  
PROPOSED WORK : LEASE NO.     
DRILL X CONVERT    DRILL DEEPER    REDRILL    FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION    PERFORATE NEW FORMATION    PLUG AND ABANDON    CLEAN OUT AND REPLUG    OTHER     
PHYSICAL CHANGE IN WELL (SPECIFY)    TARGET FORMATION BEREA/GANTZ  
ESTIMATED DEPTH 2,600'

WELL OPERATOR WACO OIL & GAS CO., INC. DESIGNATED AGENT STEPHEN E. HOLLOWAY  
ADDRESS P.O. BOX 397 GLENVILLE, WV 26351 ADDRESS P.O. BOX 397 GLENVILLE, WV 26351

SURV. LON: 80°28'19.4"  
DEC. LON: 80.4720

LATITUDE 39°20'00"

3880'

LONGITUDE 80°27'30"

5890'

SURV. LAT: 39°19'01.8"  
DEC. LAT: 39.3172

PROPOSED WELL  
NAD 83 UTM ZONE 17  
COORDINATES  
N: 14,278,568  
E: 1,789,786

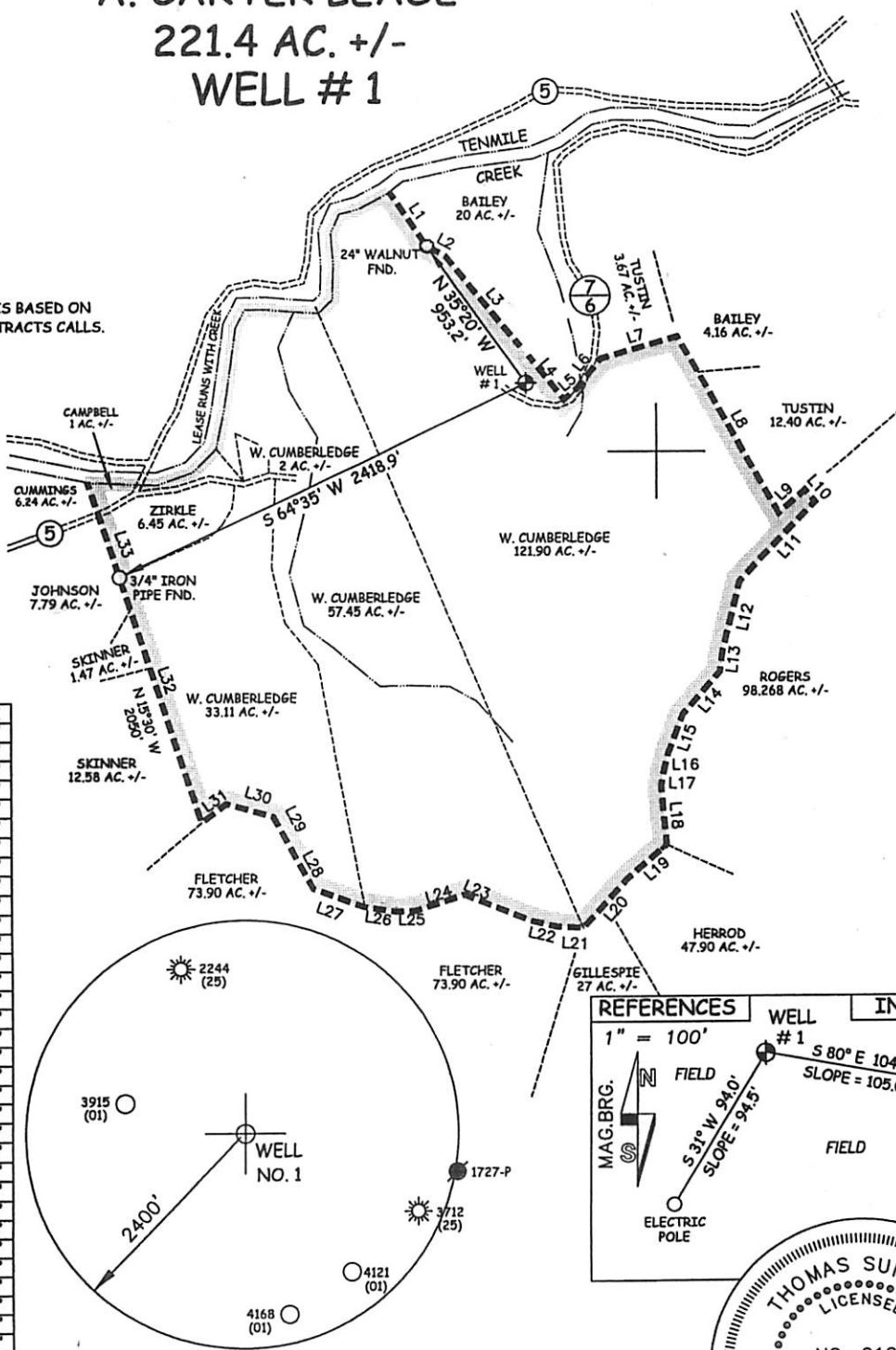
PROPOSED WELL  
ST. PLANE NAD 27  
COORDINATES  
N: 299,115  
E: 1,724,987

# A. CARTER LEASE 221.4 AC. +/- WELL # 1

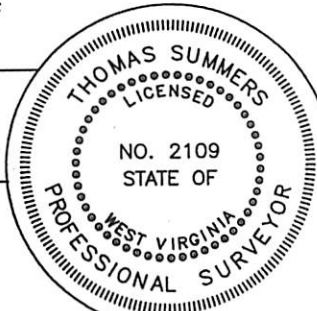
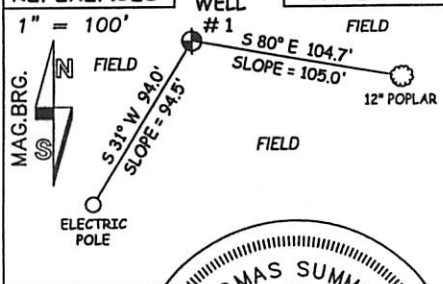
LEASE TRACT DRAWN HERE IS BASED ON  
THE LEASE TRACT & SURFACE TRACTS CALLS.

MEASUREMENTS TAKEN WITH  
TRIANGLE GEOXT SUBMETER  
MAPPING GRADE UNIT.

LINE	BEARING	DISTANCE
L1	S 31°20'00" E	404.25'
L2	S 58°30'00" E	117.98'
L3	S 36°00'00" E	698.94'
L4	S 35°30'00" E	349.80'
L5	N 52°30'00" E	91.90'
L6	N 41°30'00" E	212.85'
L7	N 76°30'00" E	440.55'
L8	S 26°00'00" E	1141.80'
L9	N 50°00'00" E	196.00'
L10	S 38°00'00" E	87.00'
L11	S 53°00'00" W	527.00'
L12	S 17°00'00" W	400.12'
L13	S 11°10'00" W	120.12'
L14	S 43°50'00" W	315.48'
L15	S 23°30'00" W	232.85'
L16	S 16°45'00" W	127.05'
L17	S 09°30'00" W	61.87'
L18	S 02°00'00" E	321.75'
L19	S 52°00'00" W	292.05'
L20	S 45°40'00" W	359.70'
L21	N 83°30'00" W	144.38'
L22	N 73°30'00" W	141.90'
L23	N 63°45'00" W	403.60'
L24	S 77°30'00" W	291.90'
L25	N 87°00'00" W	109.90'
L26	N 77°00'00" W	179.26'
L27	N 66°20'00" W	306.70'
L28	N 24°20'00" W	348.90'
L29	N 24°20'00" W	109.00'
L30	N 69°50'00" W	270.50'
L31	S 57°37'00" W	213.40'
L32	N 15°30'00" W	1380.00'
L33	N 16°20'00" W	389.00'



## REFERENCES



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

JOB # 09-076  
DRAWING # 10CARTERA  
SCALE 1" = 1000'  
MINIMUM DEGREE OF  
ACCURACY 1/2500  
PROVEN SOURCE OF ELEV.  
SUBMETER MAPPING GRADE GPS

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO  
THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION  
REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PERSCRIBED BY  
THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



STATE OF WEST VIRGINIA, DIVISION  
OF ENVIRONMENTAL PROTECTION,  
OFFICE OF OIL AND GAS  
WILLOW LAND SURVEYING PLLC  
266 HUSHERS RUN RD PENNSBORO  
WEST VIRGINIA 26415

THOMAS SUMMERS P.S. 2109

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY  
DIVISION OF OIL AND GAS

WELL TYPE: OIL ☐ GAS ☒ LIQUID INJECTION ☐ WASTE DISPOSAL ☐  
(IF "GAS") PRODUCTION ☒ STORAGE ☐ DEEP ☐ SHALLOW ☒  
LOCATION: ELEVATION 1078' WATERSHED TENMILE CREEK  
DISTRICT TENMILE COUNTY HARRISON  
QUADRANGLE WOLF SUMMIT 7.5'

DATE 11/17/10  
OPERATOR'S WELL # 1  
API WELL # 47 - 033 - 05505  
STATE COUNTY PERMIT

**CANCELLED**

SURFACE OWNER W. CUMBERLEDGE ACREAGE 121.90 ACRES +/-  
OIL & GAS ROYALTY OWNER JACK. L. CARTER ET AL LEASE ACREAGE 221.4 AC. +/-  
PROPOSED WORK: DRILL ☒ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR  
STIMULATE ☒ PLUG OFF OLD FORMATION ☐ PERFORATE NEW FORMATION ☐  
OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_  
PLUG & ABANDON ☐ CLEAN OUT & REPLUG ☐  
TARGET FORMATION ALEXANDER-BENSON  
WELL OPERATOR HALL DRILLING CO. LLC.  
ADDRESS P.O. BOX 249  
ELLENBORO, WV 26346  
ESTIMATED DEPTH 5995'  
DESIGNATED AGENT MIKE HALL  
ADDRESS P.O. BOX 249  
ELLENBORO, WV 26346  
LEASE # 21072

## COLE AND CRANE REAL ESTATE TRUST LEASE

13,292.15 ACRES±

WELL NO. WV 512115

BOTTOM HOLE  
WELL NO. WV 512115  
STATE PLANE COORDINATES  
SOUTH ZONE (NAD 27)N. 265,225  
E. 1,690,914LAT=(N) 37.72350  
LONG=(W) 82.06865UTM (NAD 83)  
N. 4,175,686  
E. 405,836

LATITUDE 37° 45' 00"

LONGITUDE 82° 05' 00"

COLE AND CRANE  
REAL ESTATE TRUST  
P/O 2,686.24 ACRES±WELL NO. WV 512115  
STATE PLANE COORDINATES  
SOUTH ZONE (NAD 27)N. 269,776  
E. 1,685,595LAT=(N) 37.73582  
LONG=(W) 82.08722UTM (NAD 83)  
N. 4,177,072  
E. 404,215

## REFERENCES

N 35° E  
63.00'  
WELL NO.  
WV 512115  
(BAR258 H1)S 07° E  
146.60'  
UTILITY POLE

WOODS

1" = 200'

## NOTES ON SURVEY

1. TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM SOUTH ZONE NAD 27.
2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 12/11/09.
3. LEASE BOUNDARY SHOWN HEREON TAKEN FROM A MAP SHOWING "PROPERTY OF COLE AND CRANE REAL ESTATE TRUST" DATED JANUARY 1925 BY W.C. McCALL, ENGINEER.
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF LOGAN COUNTY IN JULY, 2010.
5. WELL LAT./LONG. (NAD 27) ESTABLISHED BY DGPS (SUBMETER MAPPING GRADE).

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE NOVEMBER 08, 20 10

OPERATORS WELL NO. WV 512115

API  
WELL  
NO.

47 - 045 - 02408H

STATE

COUNTY

PERMIT

CANCELLED

STATE OF WEST VIRGINIA  
DIVISION OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GASMINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. 3796P512115 (289-50)  
PROVEN SOURCE OF ELEVATION DGPS (SUBMETER MAPPING GRADE) SCALE 1" = 2000'

WELL TYPE: OIL ☐ GAS ☒ LIQUID INJECTION ☐ WASTE DISPOSAL ☐ IF "GAS" PRODUCTION ☒ STORAGE ☐ DEEP ☐ SHALLOW ☒

LOCATION: ELEVATION 1,517' WATERSHED PINE CREEK  
DISTRICT ISLAND CREEK COUNTY LOGAN QUADRANGLE BARNABUS 7.5'  
SURFACE OWNER COLE & CRANE REAL ESTATE TRUST ACREAGE 19,801.944±  
ROYALTY OWNER COLE & CRANE REAL ESTATE TRUST LEASE ACREAGE 13,292.15±  
PROPOSED WORK: LEASE NO. 080574  
DRILL ☒ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR STIMULATE ☒ PLUG OFF OLD  
FORMATION ☐ PERFORATE NEW FORMATION ☐ PLUG AND ABANDON ☐ CLEAN OUT AND REPLUG ☐ OTHER ☐  
PHYSICAL CHANGE IN WELL (SPECIFY) TARGET FORMATION LOWER HURON  
ESTIMATED DEPTH 5,020' (TOTAL VERTICAL DEPTH)

WELL OPERATOR EQT PRODUCTION COMPANY  
ADDRESS 1710 PENNSYLVANIA AVE  
CHARLESTON, WV 25302DESIGNATED AGENT REX C. RAY  
ADDRESS 1710 PENNSYLVANIA AVE  
CHARLESTON, WV 25302

COUNTY NAME

PERMIT



# COLE AND CRANE REAL ESTATE TRUST

## 12,096.64 ACRES±

### WELL NO. WV 511692

DB LAND, LLC  
241.44 ACRES±

LATITUDE 37°45'00"

1"=100'

POINT @ FORKS  
OF BRANCH FOR  
LYNN @ FORKS  
OF BRANCH  
(CALLED FOR)

S 11°00' E  
43.00'  
14" YELLOW  
POPLAR  
REFERENCE

WELL NO. WV 511692  
STATE PLANE COORDINATES  
(SOUTH ZONE)(NAD27)

N. 265,054  
E. 1,730,257

LAT=(N) 37.72419  
LONG=(W) 81.93262

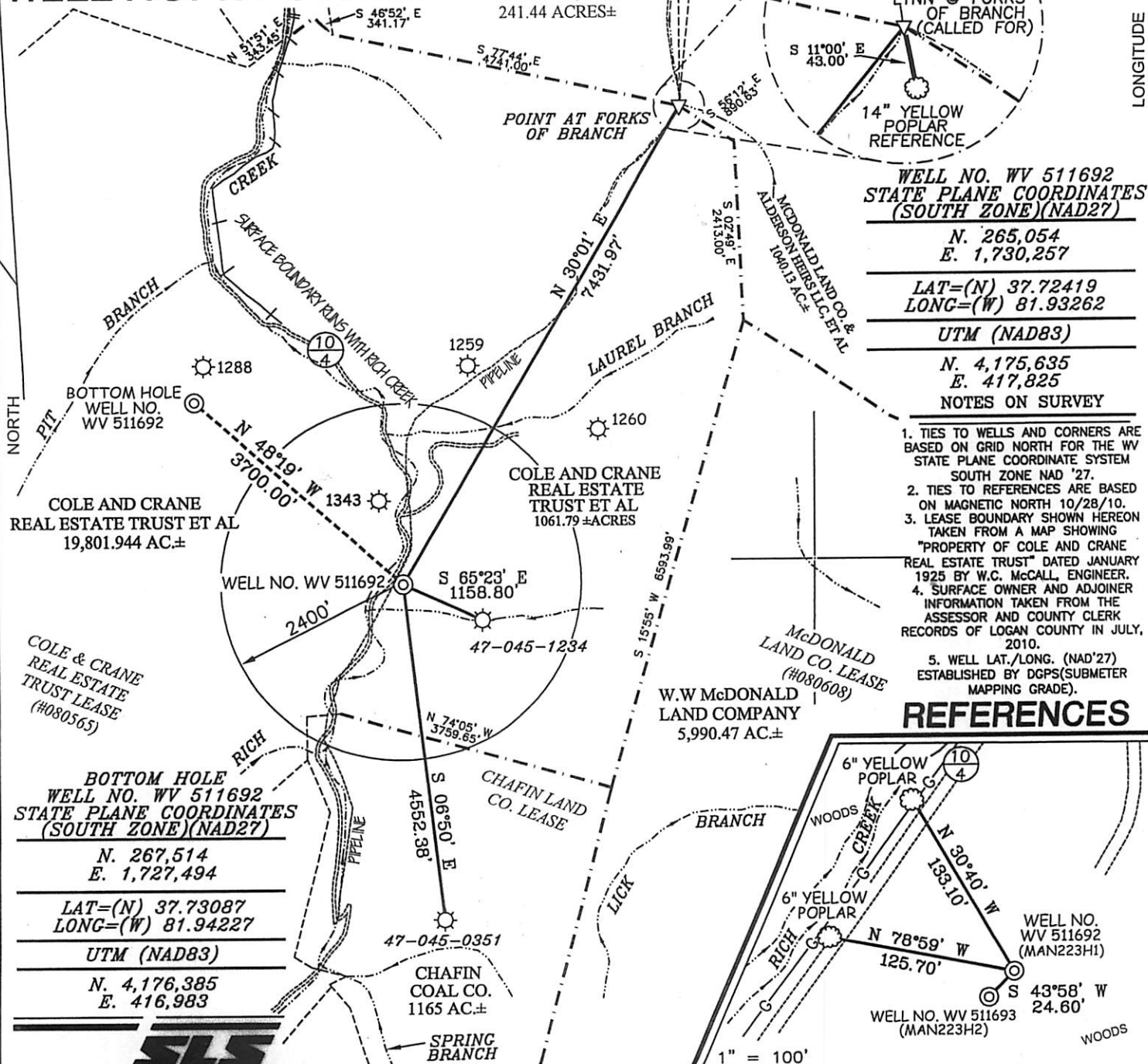
UTM (NAD83)

N. 4,175,635  
E. 417,825

## NOTES ON SURVEY

1. TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM SOUTH ZONE NAD '27.
2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 10/28/10.
3. LEASE BOUNDARY SHOWN HEREON TAKEN FROM A MAP SHOWING "PROPERTY OF COLE AND CRANE REAL ESTATE TRUST" DATED JANUARY 1925 BY W.C. McCALL, ENGINEER.
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF LOGAN COUNTY IN JULY, 2010.
5. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).

## REFERENCES



BOTTOM HOLE  
WELL NO. WV 511692  
STATE PLANE COORDINATES  
(SOUTH ZONE)(NAD27)

N. 267,514  
E. 1,727,494

LAT=(N) 37.73087  
LONG=(W) 81.94227

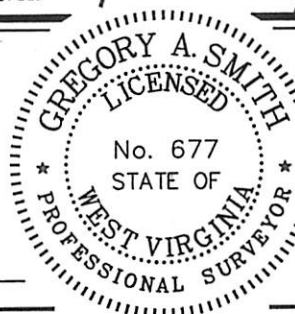
UTM (NAD83)

N. 4,176,385  
E. 416,983

**SLS**

I THE UNDERSIGNED, HEREBY CERTIFY THAT  
THIS PLAT IS CORRECT TO THE BEST OF MY  
KNOWLEDGE AND BELIEF AND SHOWS ALL  
THE INFORMATION REQUIRED BY LAW AND  
THE REGULATIONS ISSUED AND PRESCRIBED  
BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S.  
677



(+) DENOTES LOCATION OF WELL ON UNITED  
STATES TOPOGRAPHIC MAPS.

DATE NOVEMBER 17, 2010

OPERATORS WELL NO. WV 511692

API  
WELL NO. 47-045-02410H  
STATE COUNTY PERMIT

**CANCELLED**

STATE OF WEST VIRGINIA  
DIVISION OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS



MINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. 3796P511692 (335-11)  
PROVEN SOURCE OF ELEVATION DGPS (SUBMETER MAPPING GRADE) SCALE 1" = 2,000'

WELL TYPE: OIL GAS ☒ LIQUID INJECTION WASTE DISPOSAL IF "GAS" PRODUCTION ☒ STORAGE DEEP SHALLOW ☒

## LOCATION:

ELEVATION 1,068' WATERSHED RICH CREEK OF GUYANDOTTE RIVER

DISTRICT TRIADOLPHIA COUNTY LOGAN QUADRANGLE MAN 7.5'

SURFACE OWNER COLE AND CRANE REAL ESTATE TRUST ET AL ACREAGE 1,061.79±

ROYALTY OWNER COLE AND CRANE REAL ESTATE TRUST ET AL ACREAGE 12,096.64±

PROPOSED WORK: LEASE NO. 080565

DRILL ☒ CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE ☒ PLUG OFF OLD

FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER

PHYSICAL CHANGE IN WELL (SPECIFY) TARGET FORMATION LOWER HURON

ESTIMATED DEPTH 4,630' (TOTAL VERTICAL DEPTH)

WELL OPERATOR EQT PRODUCTION COMPANY  
ADDRESS 1710 PENNSYLVANIA AVENUE  
CHARLESTON, WV 25302

DESIGNATED AGENT REX C. RAY  
ADDRESS 1710 PENNSYLVANIA AVENUE  
CHARLESTON, WV 25302

COUNTY NAME

PERMIT



**Bernard Duke Lease**  
**Bernard Duke #3**  
**Mountain "V" Oil and Gas, Inc.**  
**35 Acre Lease**

**Notes:**  
 Well site coordinates are  
 N: 674,752 Lat.: 38-51-01.8  
 E: 2,219,460 Long.: 80-13-46.0  
 West Virginia Coordinate System of  
 1927 (South Zone) based upon  
 Differential GPS Measurements.  
 Plat orientation, corner and well ties are  
 based upon the grid north meridian.  
 Well location references are based upon  
 the magnetic meridian.

**Well References**  
 are based upon the  
 magnetic meridian.

**Scale:** 1" = 100'

**Legend:**  
 (⊙) Denotes Location of Well on United States Topographic Maps



Jonathan N. White  
P.S. 2122



47 - 097 - 338

Bridgeport, WV 26330

Bridgeport, WV 26330